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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/882,508 | 06/15/2001 | Michael Luby | 019186-002510US | 8343 |
| 20350 | 7590 | 08/25/2005 | EXAMINER | |
| TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 | | | ENGLAND, DAVID E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2143 | |

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/882,508 | LUBY ET AL. |
| | Examiner David E. England | Art Unit 2143 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 May 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 12, 17, 18, 26, 37 – 62, 65 – 83 and 87 – 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. (5870412) (hereinafter Schuster) in view of Samuel et al. (6018766) (hereinafter Samuel).

4. Referencing claim 1, as closely interpreted by the Examiner, Schuster teaches a method of serving content between multiple nodes via a network, the method comprising:

5. maintaining independent sessions with each of a plurality of nodes, wherein the number of clients in the plurality of clients can vary over time, and wherein the start of each session and the end of each session can be independent of the start and end of other sessions, (e.g. col. 6, lines 31 – 48, “...*the present invention may equally extend to separate and independent transmission of packets...*”;

6. receiving a stream of packet payloads from a node, each packet payload of the stream of packet payloads including data generated from the content, wherein each packet payload in at least a subset of the stream of packet payloads includes a different set of data, (e.g. col. 3, lines 6 – 14);
7. transmitting from a node each packet payload in the stream of packet payloads to each client of the plurality of clients in corresponding packets, wherein the packet payload transmitted to a client at a particular time is independent of another packet, (e.g. col. 1, lines 44 – 55, “TCP protocol, acknowledgement” & col. 6, lines 31 – 48), but does not specifically teach that the nodes are server nodes and client nodes; and
8. the packet payload transmitted to a client at any particular time is independent of the number of packets previously received by each of the clients.
9. Samuel teaches the nodes are server nodes and client nodes, (e.g., col. 13, line 59 – col. 14, line 24); and
10. the packet payload transmitted to a client at any particular time is independent of the number of packets previously received by each of the clients, (e.g., col. 21, line 45 – col. 22, line 54 & Figures 6 and 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because utilizing a server to coordinate communications between a group of users provides an efficient means for a group of users to send messages to each other at a rapid rate during the implementation of a networked interactive application, (e.g., col. 22 *et seq.*)

11. Referencing claim 2, as closely interpreted by the Examiner, Schuster teaches the content comprises an ordered set of input symbols, wherein each packet payload of the stream of packet payloads includes at least one output symbol, wherein output symbols are generated from input symbols, and wherein a client can regenerate the ordered set of input symbols to a desired accuracy from the output symbols included in a set of packet payloads received by the client, (e.g. col. 5, line 51 – col. 6, line 15).

12. Referencing claim 3, as closely interpreted by the Examiner, Schuster teaches the set of packet payloads received by the client can be received via a plurality of distinct sessions, (e.g. col. 1, lines 44 – 55, “*TCP protocol, acknowledgement*” & col. 6, lines 31 – 48).

13. Referencing claim 4, as closely interpreted by the Examiner, Schuster teaches the output symbols are generated from input symbols using a FEC code, (e.g. col. 3, lines 49 – 65).

14. Referencing claim 5, as closely interpreted by the Examiner, Schuster teaches the output symbols are generated from input symbols such that the ordered set of input symbols can be regenerated using any set of N number of the output symbols, wherein N is an integer greater than 1 and less than the number of possible output symbols, (e.g. col. 7, lines 39 – 53, “*sequence number*”).

15. Referencing claim 6, as closely interpreted by the Examiner, Schuster teaches the output symbols are input symbols, (e.g. col. 7, lines 39 – 53, “*sequence number*”).

16. Referencing claim 7, as closely interpreted by the Examiner, Schuster teaches the packets are unicast packets, (e.g. col. 1, lines 44 – 55, “*TCP protocol, acknowledgement*” *The receiving end is then typically configured to acknowledge receipt of packets and expressly request the sending end to re-transmit any lost packets.*” **Applicant is reminded that IP, TCP and UDP are unicast protocols.**).

17. Referencing claim 8, as closely interpreted by the Examiner, Schuster teaches the unicast packets are UDP unicast packets, (e.g. col. 1, lines 44 – 55, “*TCP protocol, acknowledgement*” *The receiving end is then typically configured to acknowledge receipt of packets and expressly request the sending end to re-transmit any lost packets.*” **Applicant is reminded that IP, TCP and UDP are unicast protocols.**).

18. Referencing claim 9, as closely interpreted by the Examiner, Schuster teaches the unicast packets are TCP packets, (e.g. col. 1, lines 44 – 55, “*TCP protocol, acknowledgement*” *The receiving end is then typically configured to acknowledge receipt of packets and expressly request the sending end to re-transmit any lost packets.*” **Applicant is reminded that IP, TCP and UDP are unicast protocols.**).

19. Referencing claim 10, as closely interpreted by the Examiner, Schuster teaches maintaining a list of the plurality of clients, (e.g. col. 4, lines 1 – 9, “*router*”).

20. Referencing claim 11, as closely interpreted by the Examiner, Schuster does not specifically teach receiving, via the network, a message from a client not included in the list of the plurality of clients, requesting to be added to the list; and

21. adding the client to the list.

22. Samuel teaches receiving, via the network, a message from a client not included in the list of the plurality of clients, requesting to be added to the list, (e.g. col. 17, line 49 – col. 18, line 3 & col. 18, lines 28 – 50); and

23. adding the client to the list, (e.g. col. 17, line 49 – col. 18, line 3 & col. 18, lines 28 – 50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because it would be more efficient for a system to have the ability to add or remove clients from the system so to update the list on changes in the network with client being added to a network or taken off. Furthermore, this will save storage space on the device that has the list of clients.

24. Referencing claim 12, as closely interpreted by the Examiner, Schuster does not specifically teach receiving, via the network, a message from a client included in the list requesting to be removed from the list; and

25. removing the client from the list.

26. Samuel teaches receiving, via the network, a message from a client included in the list requesting to be removed from the list, (e.g. col. 18, line 51 – col. 19, line 9); and

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27. removing the client from the list, (e.g. col. 18, line 51 – col. 19, line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because of similar reasons stated above.

28. As to claim 17, as closely interpreted by the Examiner, Schuster does not specifically teach adding a client to the list upon receiving, via the network, a connection message from the client; and

29. removing the client from the list at a time subsequent to the time at which the connection message was received form the client.

30. Samuel teaches adding a client to the list upon receiving, via the network, a connection message from the client, (e.g., col. 16, lines 55 – 62); and

31. removing the client from the list at a time subsequent to the time at which the connection message was received form the client, (e.g., col. 4, line 50 – col. 5, line 15, *“These lists are updated when hosts join or leave multicast groups.”* & col. 16, lines 55 – 62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because dividing users among groups could aid in sending specific information to only those groups of interest while leaving other groups to only receive information pertaining to them in a router.

32. Referencing claim 37, as closely interpreted by the Examiner, Schuster does not specifically teach maintaining a multicast session, wherein a plurality of multicast clients can

join the multicast session, wherein the number of the plurality of multicast clients joined to the multicast session can vary over time;

33. transmitting, via the multicast network, each packet payload in the stream of packet payloads to each multicast client of the plurality of multicast clients in corresponding multicast packets.

34. Samuel teaches maintaining a multicast session, wherein a plurality of multicast clients can join the multicast session, wherein the number of the plurality of multicast clients joined to the multicast session can vary over time, (e.g. col. 4, lines 32 – 49);

35. transmitting, via the multicast network, each packet payload in the stream of packet payloads to each multicast client of the plurality of multicast clients in corresponding multicast packets, (e.g. col. 4, lines 32 – 49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because of similar reasons stated above.

36. Claims 18, 26, 38 – 62, 65 – 83 and 87 – 94 are rejected for similar reasons as stated above.

37. Claims 19 – 22 and 84 – 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster (5870412) in view of Samuel (6018766) in further view of Lim et al. (6434619) (hereinafter Lim).

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38. As per claim 19, as closely interpreted by the Examiner, Schuster and Samuel do not specifically teach the first join message includes a time value that indicates when to remove the corresponding client from the list includes removing the corresponding client from the list at a time based on the time value. Lim teaches the first join message includes a time value that indicates when to remove the corresponding client from the list includes removing the corresponding client from the list at a time based on the time value, (e.g., col. 12, lines 14 – 35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Lim with the combine system of Schuster and Samuel because if the user is inactive for an extended period of time, resources are not in use and are wasted when they could be used on a client that is actively utilizing the network. Therefore, removing a client after a period of time of inactivity would free up resources that could be used on active clients.

39. Claims 20 – 22, 84 – 86 are rejected for similar reasons as stated above.

40. Claims 14 and 23 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster (5870412) in view of Samuel (6018766) in further view of Merriman et al. (5948061) (hereinafter Merriman).

41. Referencing claim 14, as closely interpreted by the Examiner, Schuster and Samuel do not specifically teach transmitting to the client not included in the list of the plurality of clients a cookie, and wherein adding the client to the list includes adding the client to the list, only if the message received from the client includes the cookie.

42. Merriman teaches transmitting to the client not included in the list of the plurality of clients a cookie, and wherein adding the client to the list includes adding the client to the list, only if the message received from the client includes the cookie, (e.g. col. 5, lines 10 – 33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Merriman with the combine system of Schuster and Samuel because the cookie would aid in the user being recognized by the system as recurring member of the network.

43. Claims 23 – 25 are rejected for similar reasons as stated above.

Response to Arguments

44. Applicant's arguments with respect to claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

45. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

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WILLIAM C. VAUGHN, JR.
MARY EXAMINER